

Commodore

Monitor 1402

Service Manual

8/89



URHEBERRECHTSVERMERKE

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SERVICE MANUAL

1402

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INTERNATIONAL EDITION

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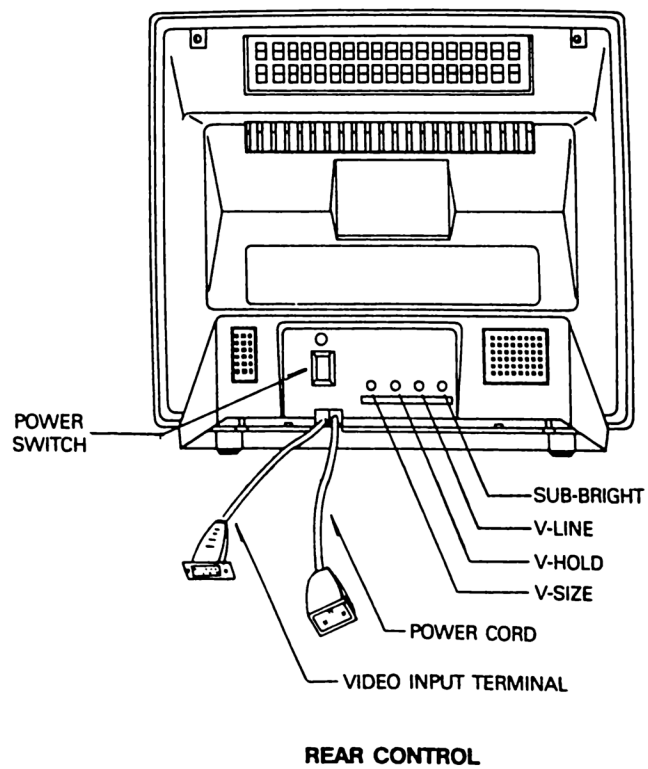
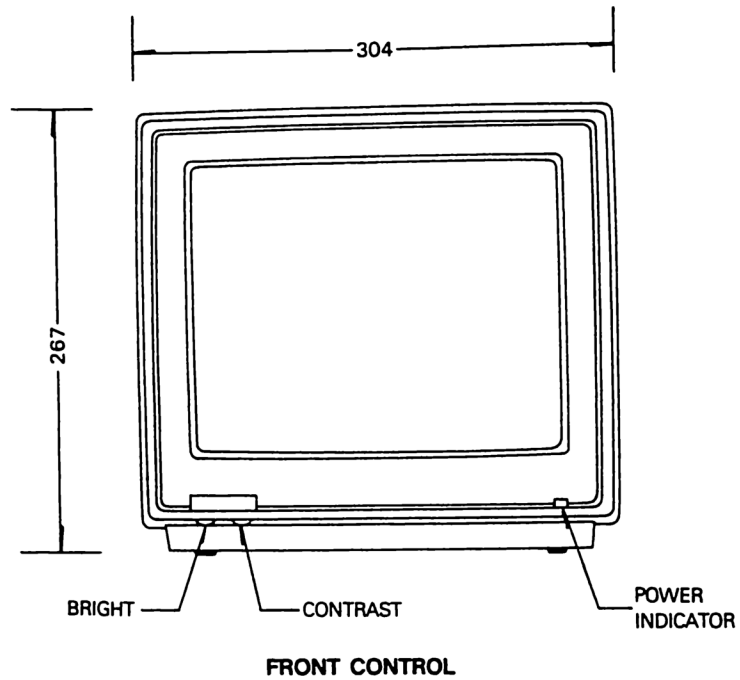
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CONTENTS

SPECIFICATION.....	1
CONTROL DESCRIPTION.....	2
VIDEO INPUT SIGNAL.....	4
VIDEO INPUT TERMINAL.....	5
CONNECTING WITH EXTERNAL EQUIPMENT.....	6
TROUBLE SHOOTING.....	7
BLOCK DIAGRAM.....	8
SCHEMATIC DIAGRAM.....	11
REPLACEMENT PARTS LIST.....	13
PCB LAYOUT.....	21
EXPLODED VIEW.....	23
EXPLODED VIEW(SWIVEL).....	25

CONTROL DESCRIPTION



1. Contrast

This increases the brightness of only black & white when turned clockwise, and decreases the brightness of black & white when turned counterclockwise.

2. Bright

This controls the brightness of the entire screen.

3. Power Switch

Press the power switch to turn the power on. Press it again to turn the power off.

4. Power Indicator

This indicator lights when the display is on.

5. Power Cable

Plug this power cable into an AC 220V FOR VDE, AC 120V FOR VL/CSA Electrical outlet.

6. Input Connector

This is used to feed the signal from the computer.

7. V-Hold

This control is used to obtain stability of the screen picture. Use this knob when the screen picture does not hold.(Adjust with a screw driver)

8. V-Size

Rotating this control counterclockwise will make the screen longer upwards and downwards.(Adjust with a screw driver)

9. V-Linearity

Rotating this control counterclockwise will make the symmetrical size of upwards and downwards.(Adjust with a screw driver)

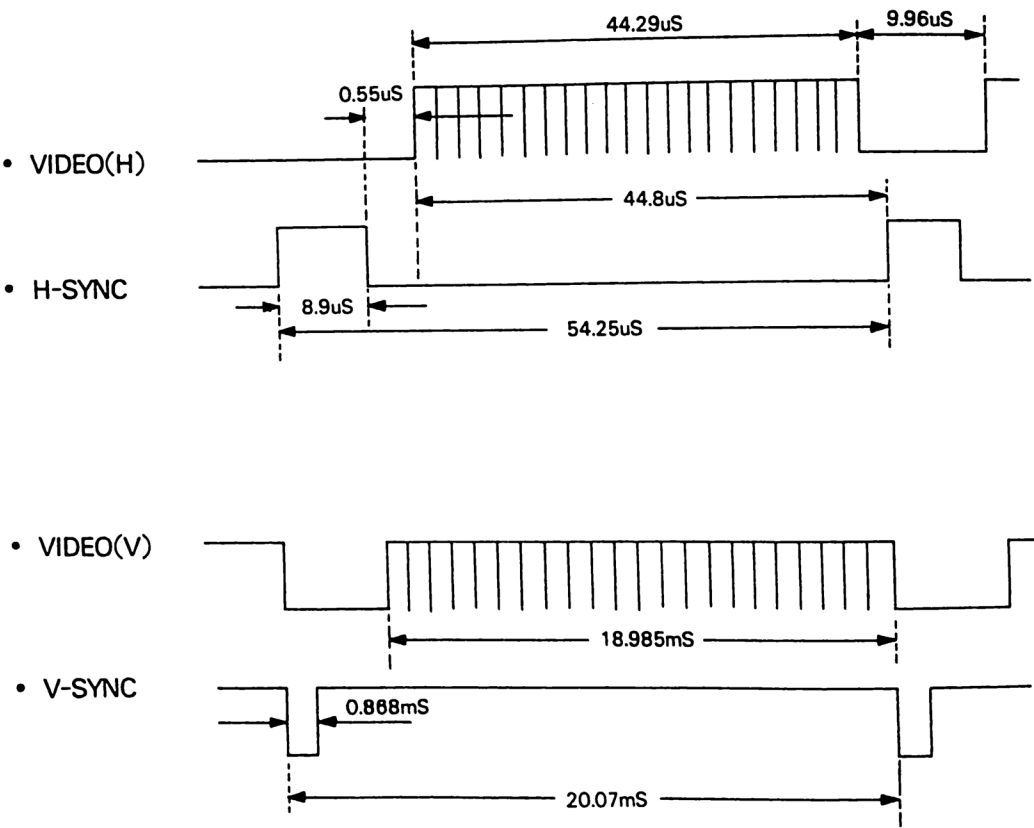
VIDEO INPUT SIGNAL

Recommended signals are shown below

1. Signal level

Video input	: TTL level
Intensity	TTL level
Sync input	: H-sync : TTL level
	: V-sync : TTL level

2. Wave form



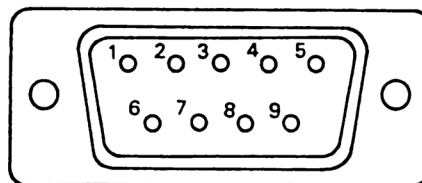
VIDEO INPUT TERMINAL

A 9 pin D-sub connector is used as the input signal connector.
Pin and input signals are shown in the table below.

PIN CONNECTION

PIN NO.	CONNECTION
1	GND
2	GND
3	
4	
5	
6	INTENSITY
7	VIDEO
8	HORIZONTAL SYNC
9	VERTICAL SYNC

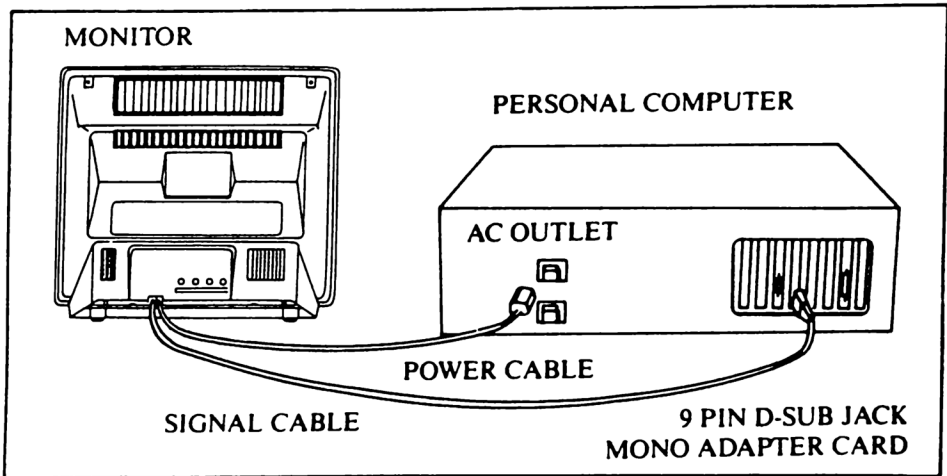
D-SUBMINIATURE CONNECTOR



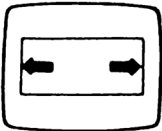
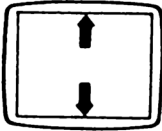
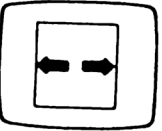
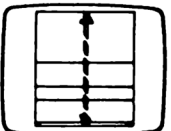
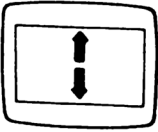
CONNECTING WITH EXTERNAL EQUIPMENT

CAUTIONS

Be sure to turn off the power of your computer before connecting the monitor.

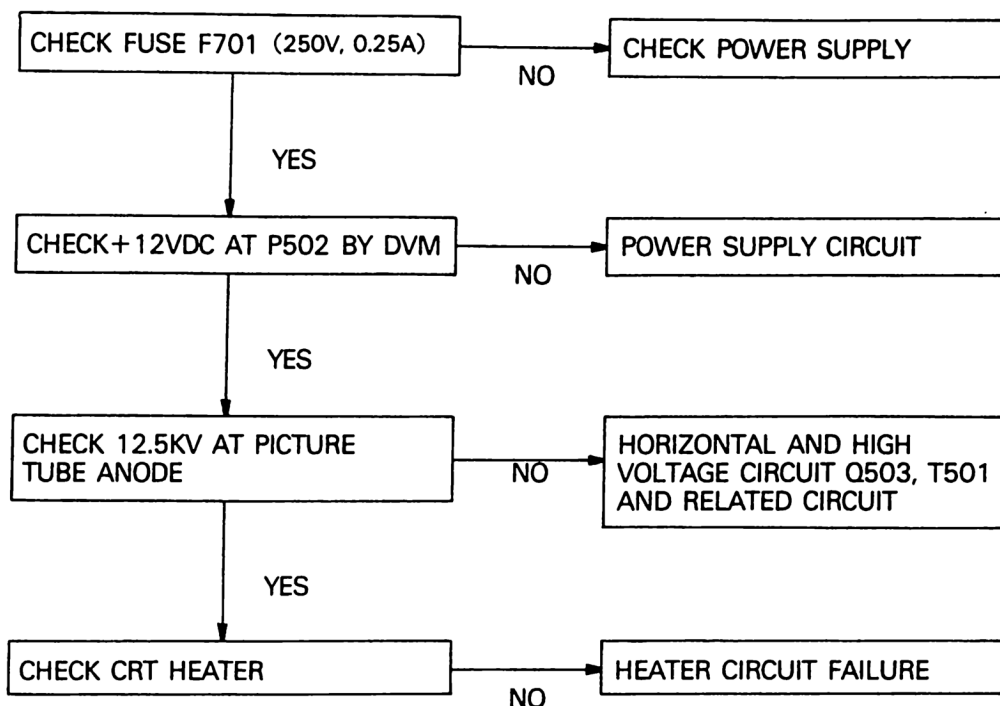


If signals other than those recommend are received, one or more of the following phenomenon may be experienced.

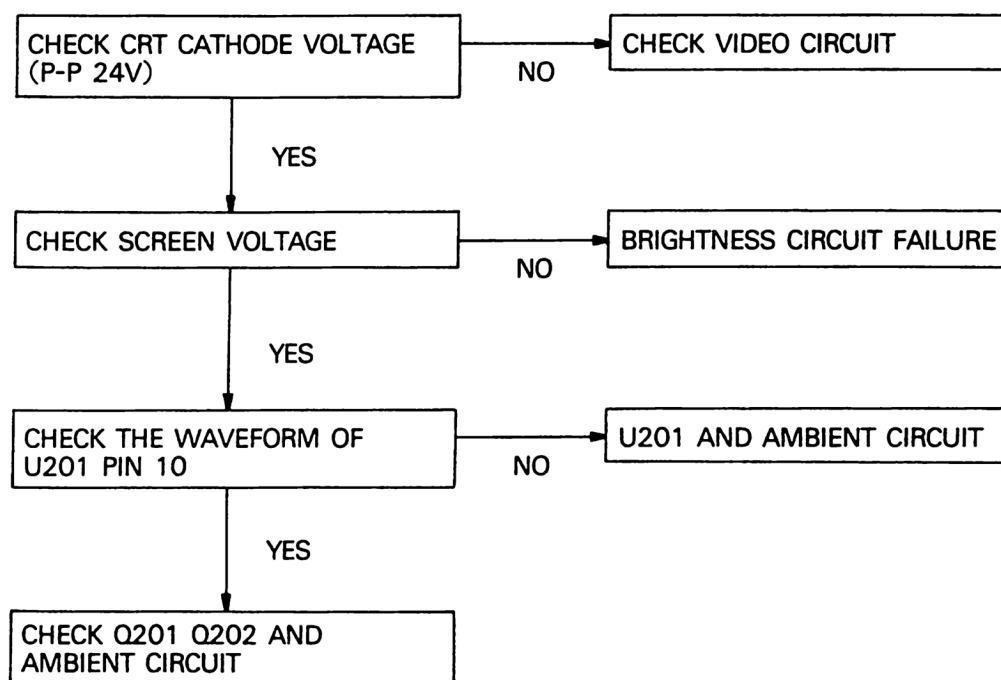
Phenomenon	Cause	Phenomenon	Cause
Picture width too wide 	Data display period is more than 44.29μS	Height of picture too much extended 	Vertical flyback period is 20H or less.
Picture width too narrow 	Data display period 44.29μS or less.	Picture rolls vertically (upward and downward) 	Vertical sync frequency is not set to 50Hz.
Height of picture too shortened. 	Vertical flyback period is 20H or more.		

TROUBLE SHOOTING

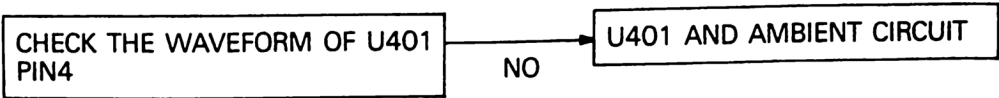
1. NO RASTER



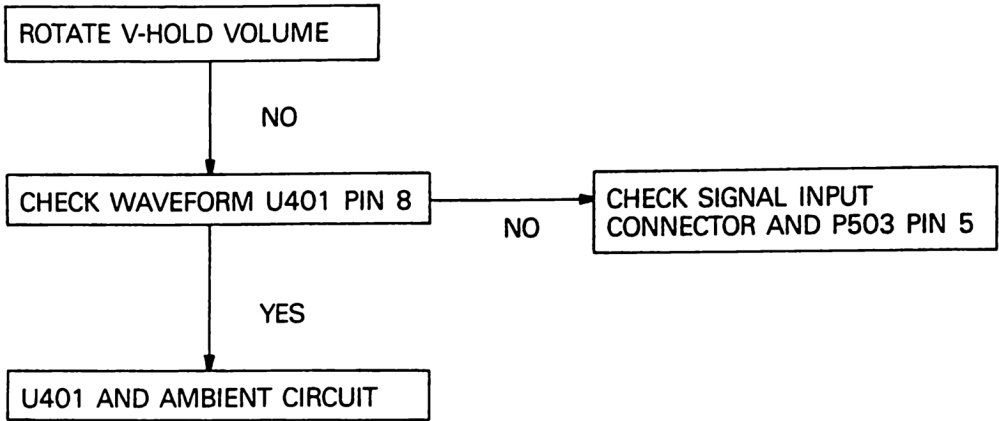
2. NO PICTURE



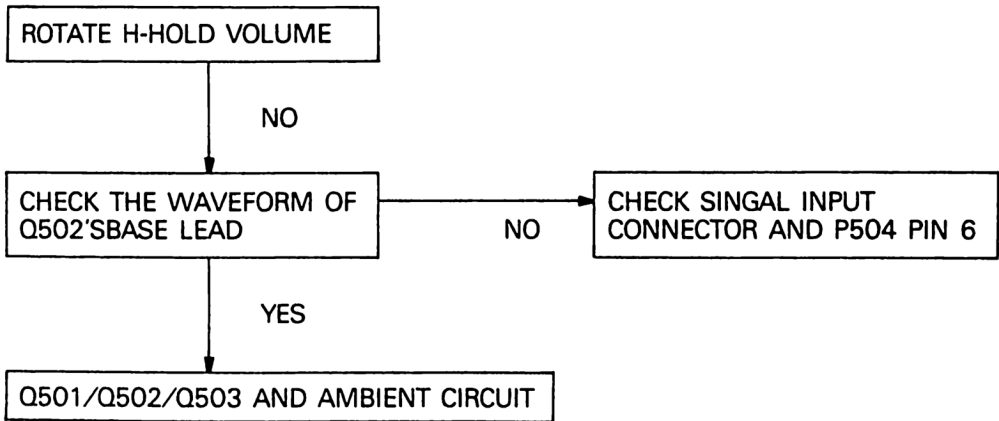
3. VERTICAL DEFLECTION FAILURE



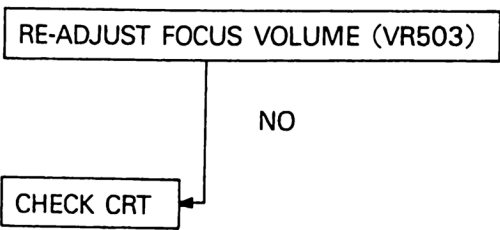
4. VERTICAL SYNC FAILURE

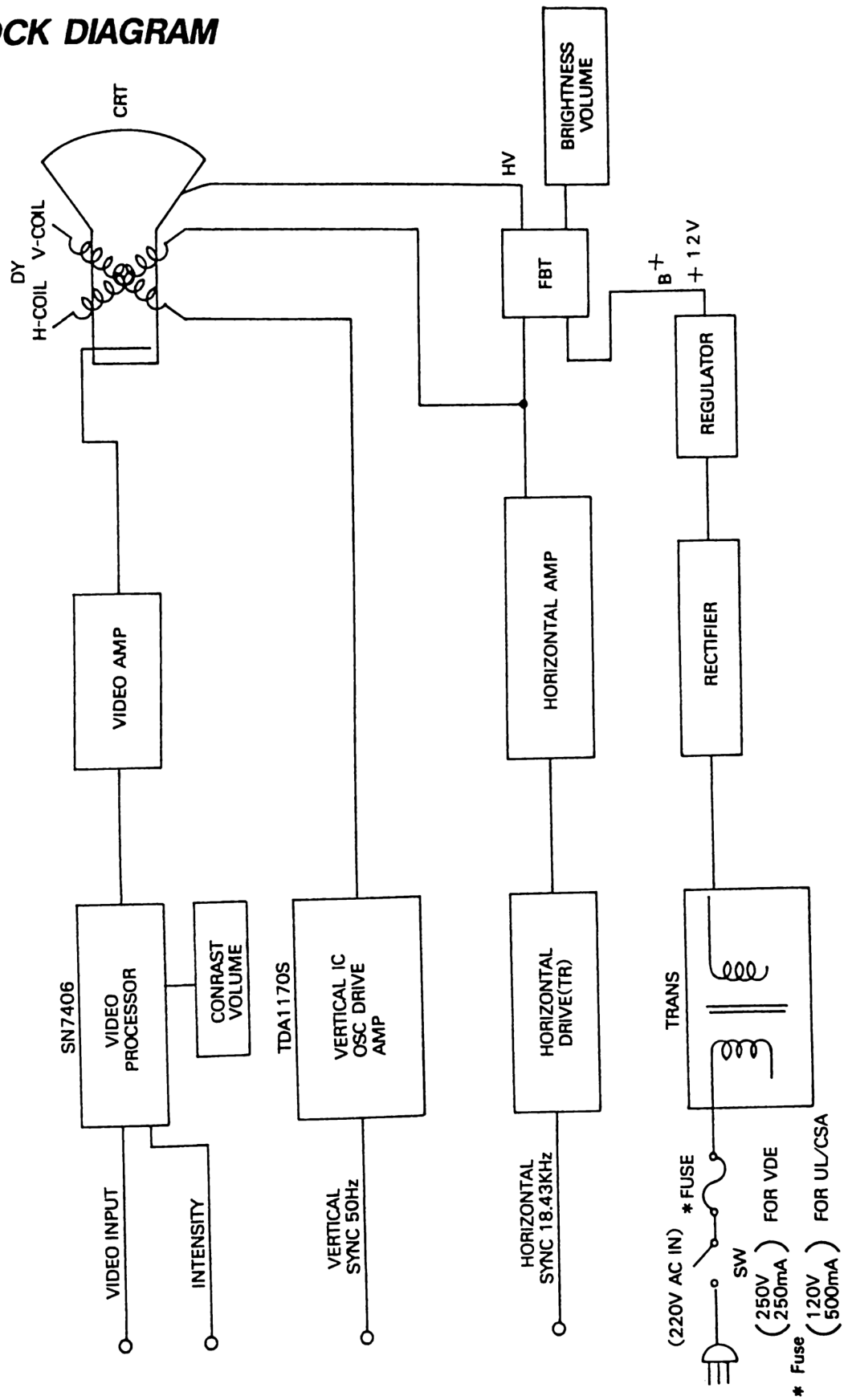


5. HORIZONTAL SYNC FAILURE

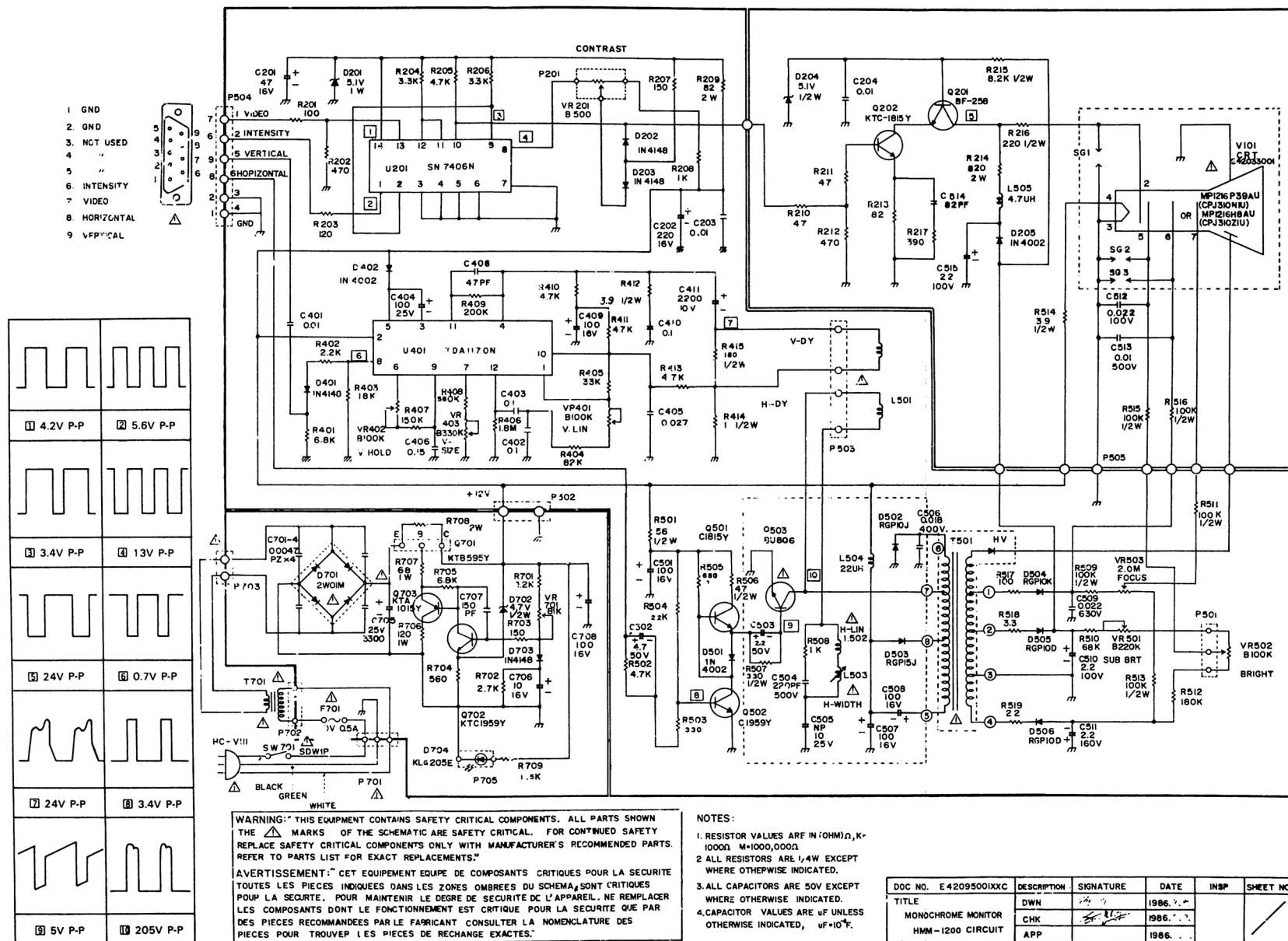


6. FOCUS



BLOCK DIAGRAM

SCHEMATIC DIAGRAM



REPLACEMENT PARTS LIST


ABBREVIATION :

RD R-CARBON
RS R-METAL, OXIDE
RX R-CEMENT

CK C-CERAMIC, HK
CE C-ELECTROLYTIC
CC C-CERAMIC, TEMP
CQ C-POLYESTER,
C-POLYPROPYLENE
CS C-TANTL, SOLID

1402 SERVICE MANUAL

1. 1402 OPTION

NO.	COMMODORE PART CODE	VENDOR PART CODE	PART NAME & DESCRIPTION	QTY	LOCATION CODE	REMARKS
1	602240-01	E42025001020	FUSE 3SB500 0.5A 250V(UL/CSA)	1		
2	-02	E4202500501A	FUSE, 19195 0.25A 250V(VDE)	1	F701	
3	-03	E42076008010	CLIP FUSE FC51E(VDE)	1		
4	-04	E42076001010	CLIP FUSE, FC101(UL/CSA)	2	F701A	
	-05	E42045064010	CORD ASS'Y, 180Cm(VDE)	1		
	-06	E42045046030	CORD ASS'Y 225Cm(UL/CSA)	1	T701	
	-07	E42031007010	TRANS POWER(UL/CSA)	1	T701	
	-08	E42031030027	TRANS POWER(VDE)	1	V101	
	-09	E42033001120	CRT PAPER WHITE MP1216 H17 AU	1		
	-10	E42045078010	CRT GROUND WIRE ASSY	1		
	-11	E42019004030	COIL-DY KYS-20630	1	L501	
	-12	E4204505100A	WARNING LABEL DHHS	1		
	-13	E42090001010	CAUTION LABEL(FUSE)	1		
	-14	E42076040010	RUBBER MAGNET	1		
	-15	B4208000200A	SCREW ST2 TRS(+) 4×20 MSZPC	1		

2. ITEM : 1402

MODULE : PACKING ASS'Y

NO.	COMMODORE PART CODE	VENDOR PART CODE	PART NAME & DESCRIPTION	QTY	LOCATION CODE	REMARKS
1	602240-18	B4004500200A	LEBEL SERIAL, VELLUM PAPER	5		
2	-19	B4209501100A	BAG PE(SET), P.E CLEAR TO.05	1		
3	-20	B4209501800A	BAG PE(MANUAL), P.E CLEAR TO.0	1		
4	-21	B4209504200A	PE BAG(PWR CORD), P.E CLEAR TO.	1		
5	-22	B4208501000A	CORD BAND. DACB-150	1		
6	-23	B4209506700A	SHIPPING LABEL, VELLUM PAPER	1		
7	-24	B4209516200A	BOX CARTON, DW-2(EXPORT)	1		
8	-25	B4209513700A	CUSHION R, E.P.S 50TIMES	1		
9	-26	B4209513800A	CUSHION L, E.P.S 50TIMES	1		

3. ITEM : 1402

MODULE : CASE ASS'Y

NO.	COMMODORE PART CODE	VENDOR PART CODE	PART NAME & DESCRIPTION	QTY	LOCATION CODE	REMARKS
1	602240-27	E42076003010	SILICON RUBBER (20×25)MM	2		
2	-28	B4201507600A	COVER FRONT, ABS(94-0) HANNAM	1		
3	-29	B4203500600B	RUBBER FOOT, CR 60-70	2		
4	-30	B4208000200A	SCREW STZ TRS(+) 4×20 MSZ	4		
5	-31	B4204000300A	SPRING EXTENTION	1		
6	-32	B4201508200A	KNOB V.R, ABS(94-0) HANNAM V275	2		
7	-33	B4201013800A	BRKT VOLUME SECC T1.2	1		
8	-34	M13434014014	SCREW ST2 TRS(×) 4*14 MsNI	2		
9	-35	M13434020014	SCREW ST2 TRS(×) 4*20 MsNI	2		
10	-36	M11143010014	SCREW BIN(×) M3*10 MsNI	1		
11	-37	M11144010014	SCREW BIN(×) M4*10 MsNI	1		
12	-38	B4204505800A	LEXAN TO.128, W/DOUBLE FACED TA	1		
13	-39	M13444010012	SCREW ST2 BIN(×) 4.10 MSZ	2		
14	-40	E4201508200A	SCREW, ST2 BIN(×) 4*10 MsZPC	2		
15	-41	M13443010012	SCREW ST2 BIN(×) 3 10 MSZ	1		
16	-42	B4201502200A	STOPPER CORD, ABS(94-0), WHITE	2		
17	-43	B4204505700A	PLATE LOGO, A1050P TO.4	1		
18	-44	B4201013700A	CHASSIS SUB, SPCC T1.0	1		
19	-45	M11183008012	SCREW(M/S) WAS M3×8 MSZPC	1		
20	-46	B4201004200A	GRIP GROUND SPCC TO.5 ZPC	1		
21	-47	M14743010012	SCREW TT3 BIN(+) 3*10 MSZP	1		
22	-48	B4202500200C	HEAT SINK TR, A6063-T5	1		
23	-49	M11143010012	SCREW BIN(+) 3×10	2		
24	-50	B4201001400B	BRKT(TR), SUB3 T1.8 ZPC2	1		
25	-51	M11143012012	SCREW BIN(+) M3×12 MSZPC	1		
26	-52	M17314006012	SCREW PAN(+) M4*6 MSZPC	4		
27	-53	M11184006012	SCREW WAS(+) M4×6 BSBMD2	1		
28	-54	B4201507700A	COVER REAR, ABS(94-0) HANNAMV275	1		
29	-55	B4203001800A	NUT STANDOFF, SK-5 ZP2	1		
30	-56		LABEL SPEC	1		

1402 SERVICE MANUAL

4. MODEL : 1402 MODULE : ELECTRICAL OTHERS

NO.	COMMODORE PART CODE	VENDOR PART CODE	PART NAME & DESCRIPTION	QTY	LOCATION CODE	REMARKS
1	602240-57	WNTB1H0480GY	HI SHRINK TUBE M2 3/16 INCH	0.1		
2	-58	WNTB1H0640GY	HI SHRINK TUBE M2 1/4 INCH	0.1		
3	-59	E42019004020	COIL-DY DMK-1294 QL	1	L501	
4	-60	E42017001270	SEMI-RES ROTARY 500 OHM	1	VR201	
5	-61	E42017001340	SEMI-RES ROTARY 100K OHM	1	VR502	
6	-62	E4204502201A	TBC CRT WIRE ASSY	1		
7	-63	DNKLG208---	LED KLG208E	1	D704	
8	-64	E4204501501A	SIGNAL CABLE, DSUB 9PIN 125Cm	1	CB11	
9	-65	E42045050010	2 WIRE ASSY RING	2		
10	-66	E42045051010	CONN ASS'Y	1		
11	-67	E42043044000	SWITCH AC, T-881SBSS3	1	SW701	
12	-68	TNKT8595Y---	TRANSISTOR, KTB 595-Y	1	Q701	
13	-69	E4209201411A	USER'S MANUAL	1		
14	-70		WARRANTY CARD	1		
15	-71		SILICAL GEL	1		

5. MODEL : 1402
MODULE : CRT BOARD

NO.	COMMODORE PART CODE	VENDOR PART CODE	PART NAME & DESCRIPTION	QTY	LOCATION CODE	REMARKS
1	602240-72	TNBF258-----	TRANSISTOR BF258	1	Q201	
2	-73	E42043029010	1 PIN R93-91	1	P505	
3	-74	TNKT1815Y--	TRANSISTOR, KTC1815Y	1	Q501	
4	-75	DTBZX83-C5V1	DIODE-ZENER 5.1V 0.5W 6% TAPING	1	D204	
5	-76	DT1N4002----	1N4002 TAPING	1	D205	
6	-77	RD-4POT0470J	RESISTOR, CF RD 1/4W 47 OHM J TA	2	R210,211	
7	-78	RD-4POT0471J	RESISTOR, CF RD 1/4W 470 OHM J T	1	R212	
8	-79	RD-4POT0680J	RESISTOR, CF RD 1/4W 68 OHM J TA	1	R213	
9	-80	RS02POT0821J	RESISTOR, MOF RS 2W 820 OHM J FO	1	R214	
10	-81	RD-2POT0822J	RESISTOR, CF RD 1/2W 8.2K OHM J	1	R215	
11	-82	RD-2POT0221J	RESISTOR, CF RD 1/2W 220 OHM J T	1	R216	
12	-83	RD-4POT0391J	RESISTOR, CF RD 1/4W 390 OHM J T	1	R217	
13	-84	RD-2POT03R9J	RESISTOR, CF RD 1/2W 3.9 OHM	1	R514	
14	-85	RD-2POT0104J	RESISTOR, CF RD 1/2W 100K OHM J	1	R515	
15	-86	RD-4POT0106J	RESISTOR, CF RD 1/2W 10M OHM J T	1	R516	
16	-87	CK45FN1H103Z	CAPACITOR, CD CK45F 50V 0.01uF Z	1	C204	
17	-88	CQ92BN2A223K	CAPACITOR, PE CQ92 100V 0.022uF	1	C512	
18	-89	CK45BN2H103K	CAPACITOR, CD CK45B 500V 0.01uF	1	C513	
19	-90	CC45CN1H820J	CAPACITOR, CD CC45CH 50V 82pF J	1	C514	
20	-91	CE04AN2A220M	CAPACITOR, EL CE04SM 100V 22uF M	1	C515	
21	-92	E42019001130	COIL PEAKING 5.0D 4.7uH 10%	1	L505	
22	-93	E42043027010	SOCKET-CRT, CS 619	1	SK701	
23	-94	E42039001010	SPARK GAP, 1500V+ -500V	3	SG1,SG2 SG3	
24	-95	B4201001300A	CASE SHIELD TUBE SPTE T : 0.3	1		

1402 SERVICE MANUAL

6. MODEL : 1402

MODULE : POWER BOARD

NO.	COMMODORE PART CODE	VENDOR PART CODE	PART NAME & DESCRIPTION	QTY	LOCATION CODE	REMARKS
1	602240-96	DNRS202-----	BRIDGE DIODE, RS202	1	D701	
2	-97	TNKT1959Y--	TRANSISTOR, KTC1959Y	1	Q502	
3	-98	TNKT1015Y--	TRANSISTOR, KTA1015Y	1	Q703	
4	-99	DTBZX83-C4V7	DIODE-ZENER 4.7V 0.5M 6% TAPING	1	D702	
5	602241-00	DN1N4148----	1N4148 TAPING	1	D703	
6	602241-01	RD-4POT0122J	RESISTOR, CF RD 1/4W 1.2K OHM J T	1	R701	
7	-02	RD-4POT0272J	RESISTOR, CF RD 1/4W 2.7K OHM J T	1	R702	
8	-03	RD-4POT0151J	RESISTOR, CF RD 1/4W 150 OHM J TA	1	R703	
9	-04	RD-4POT0561J	RESISTOR, CF RD 1/4W 560 OHM J TA	1	R704	
10	-05	RD-4POT0682J	RESISTOR, CF RD 1/4W 6.8K OHM J T	1	R705	
11	-06	RS01POF0121J	RESISTOR, MOF RS 1W 120 OHM J FOR	1	R706	
12	-07	RS01POF0680J	RESISTOR, MOF RS 1W 68 OHM J FORM	1	R707	
13	-08	RS01POF0560J	RESISTOR, MOF RS 2W 56 OHM J FORM	1	R708	
14	-09	RD-4POT0152J	RESISTOR, CF RD 1/4W 1.5K OHM J T	1	R709	
15	-10	E42015005070	VOLUME, SEMI H 1021A B 1K OHM	1	VR701	
16	-11	CK45TN1H472Z	CAPACITOR, CD CK45B 50V 4700uF Z	4	C701,702 703,704	
17	-12	CE04AN1E332M	CAPACITOR, EL CE04SM 25V 3300uF M	1	C705	
18	-13	CE04AN1D100M	CAPACITOR, EL CE04SM 16V 10uF M	1	C706	
19	-14	CC45CN1H151K	CAPACITOR, CD CC45CH 50V 150pF K	1	C707	
20	-15	CE04AN1C101M	CAPACITOR, EL CE04SM 16V 100uF M	1	C708	
21	-16	E42043003030	CONN. POST-3P 5096-03C	1	P701	
22	-17	E42043004010	CONN. POST-2P 5096-02C	1	P702	
23	-18	E42043024010	CONN. POST-2P 5096-02A	1	P703	
24	-19	E42043007020	CONN. POST-3P 5096-03A	1	P705	
25	-20	E42045001050	3-PIN CONN. ASSY 5264-03 UL1007	1	J705	
26	-21	E42045001070	3-PIN CONN. ASSY 5264-03 UL1007	1	Q701A	
27	-22	E42045007010	2PIN CONN ASY5239-02 UL1015 AWG22	1	J502	

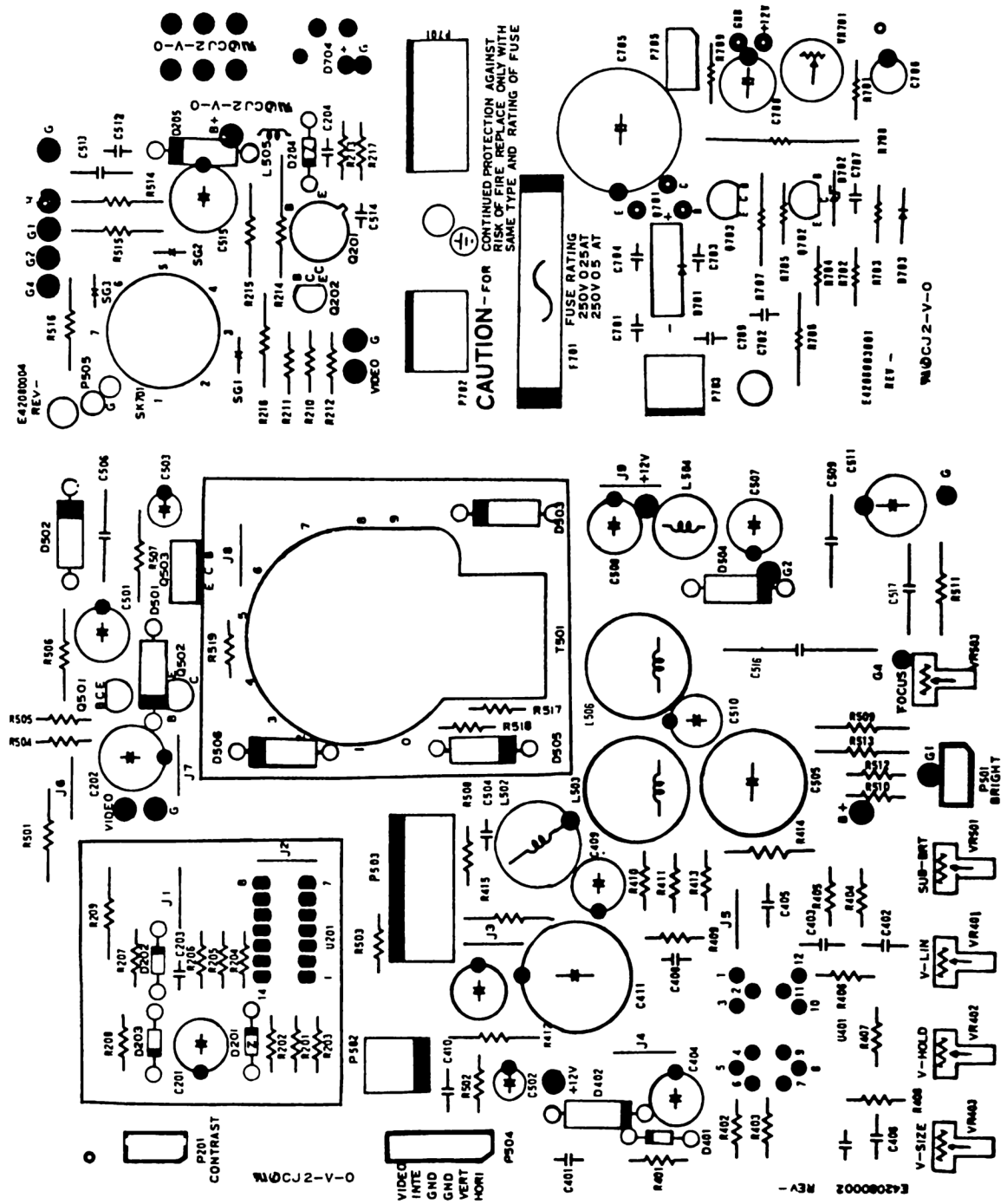
7. MODEL : 1402
MODULE : MAIN BOARD

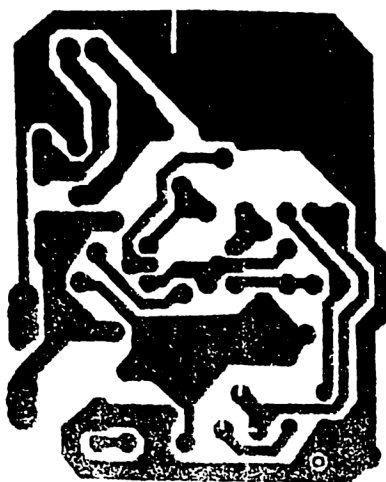
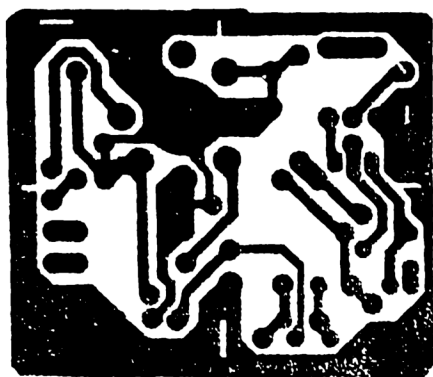
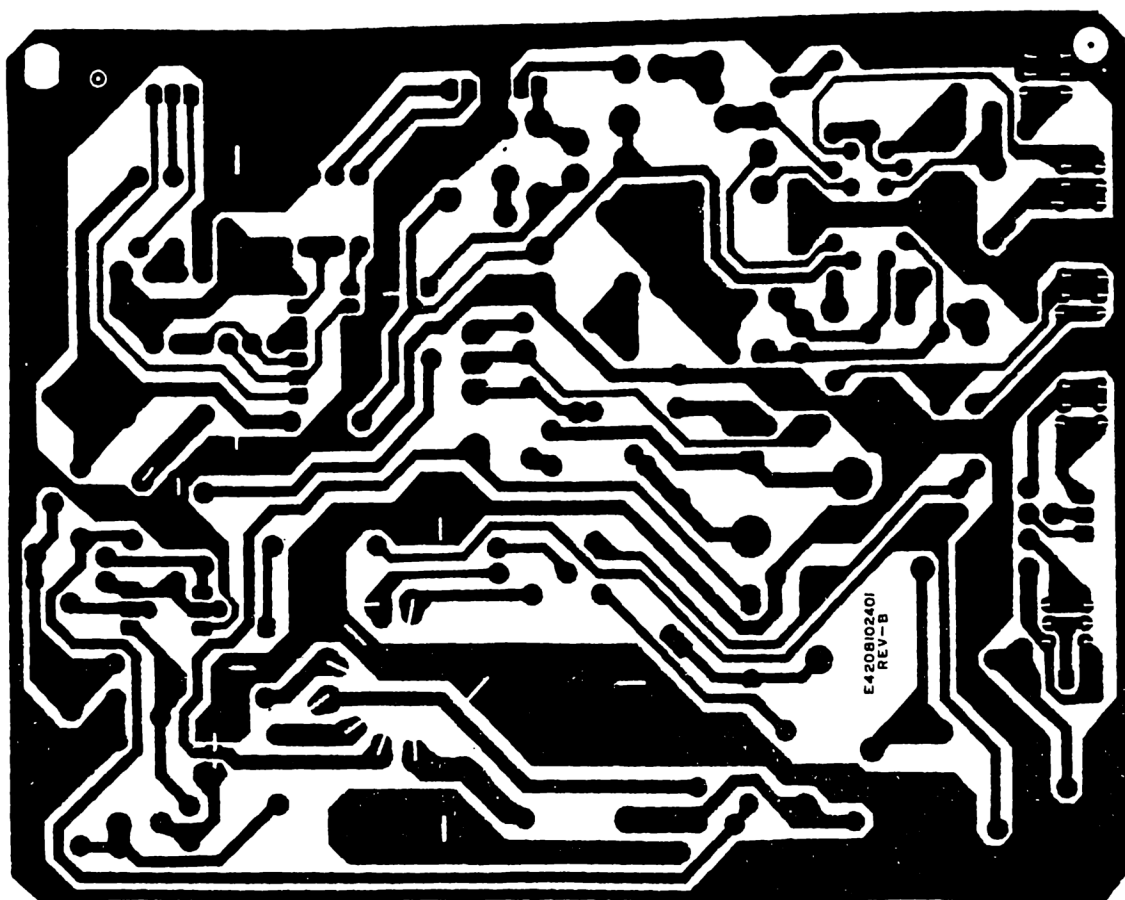
NO.	COMMODORE PART CODE	VENDOR PART CODE	PART NAME & DESCRIPTION	QTY	LOCATION CODE	REMARKS
1	602241-23	U7406N-----	IC TTL, SN7406N/HD7406P	1	U201	
2	-24	UTDA1170N---	IC, TDA1170A	1	U401	
3	-25	TNBU806-----	TRANSISTOR, BU806	1	Q503	
4	-26	DTRGP100----	DIODE RGP 10D	1	D505,D506	
5	-27	DTRGP10J----	DIODE RGP 10J	1	D502	
6	-28	DTRGP10K----	DIODE RGP 10K	1	D504	
7	-29	DTRGP15J----	DIODE RGP 15J	1	D503	
8	-30	E4208100101F	PCB 162mm×195mm×1.6t	1		
9	-31	TNKT1815Y--	TRANSISTOR, KTC1815Y	1	Q501	
10	-32	TNKT1959Y--	TRANSISTOR, KTC1959Y	1	Q702	
11	-33	DTUZP5.1B---	DIODE-ZENER, 5.1V 1W 5%	1	D201	
12	-34	DT1N4733A---	DIODE 5.1V 1W 4%	1	(D201)	
13	-35	DT1N4002----	DIODE 1N4002 TAPING	2	D402,D501	
14	-36	DT1N4148----	DIODE 1N4148 TAPING	3	D202,D203	
15	-37	RD-2POT0140J	RES C-F 1.0 OHM 1/2W J T	1	R414	
16	-38	RD-2POT0104J	RES C-F 100k OHM 1/2W J T	3	R415	
17	-39	RD-2POT0181J	RES C-F 180 OHM 1/2W J T	1	R501	
18	-40	RD-2POT03R9J	RES C-F 3.9 OHM 1/2W J T	1	R412	
19	-41	RD-2POT0470J	RES C-F 47 OHM 1/2W J T	1	R506	
20	-42	RD-2POT0560J	RES C-F 56 OHM 1/2W J T	1	R501	
21	-43	RD-2POT0331J	RES C-F 330 OHM 1/2W J T	1	R507	
22	-44	RD-4POT0101J	RES C-F 100 OHM 1/4W J T	1	R201	
23	-45	RD-4POT0102J	RES C-F 1K OHM 1/4W J T	1	R508	
24	-46	RD-4POT0121J	RES C-F 120 OHM 1/4W J T	1	R203	
25	-47	RD-4POT0681J	RES C-F 680 OHM 1/4W J T	1	R505	
26	-48	RD-4POT0123J	RES C-F 12K OHM 1/4W J T	1	R504	
27	-49	RD-4POT0151J	RES C-F 150 OHM 1/4W J T	1	R207	
28	-50	RD-4POT0154J	RES C-F 150K OHM 1/4W J T	1	R407	
29	-51	RD-4POT0183J	RES C-F 18K OHM 1/4W J T	1	R403	
30	-52	RD-4POT0184J	RES C-F 180K OHM 1/4W J T	1	R512	
31	-53	RD-4POT0185J	RES C-F 1.8M OHM 1/4W J T	1	R406	
32	-54	RD-4POT0204J	RES C-F 200K OHM 1/4W J T	1	R409	
33	-55	RD-4POT0222J	RES C-F 2.2K OHM 1/4W J T	1	R402	
34	-56	RD-4POT0472J	RES C-F 4.7K OHM 1/4W J T	5	R502	
35	-57	RD-4POT0471J	RES C-F 470 OHM 1/4W J T	1	R212	
36	-58	RD-4POT0332J	RES C-F 3.3K OHM 1/4W J T	2	R206	
37	-59	RD-4POT0333J	RES C-F 33K OHM 1/4W J T	1	R405	
38	-60	RD-4POT0331J	RES C-F 330 OHM 1/4W J T	1	R503	
39	-61	RD-4POT03R3J	RES C-F 3.3 OHM 1/4W J T	1	R518	
40	-62	RD-4POT0682J	RES C-F 6.8K OHM 1/4W J T	1	R401	
41	-63	RD-4POT0823J	RES C-F 82K OHM 1/4W J T	1	R404	
42	-64	RD-4POT0564J	RES C-F 560K OHM 1/4W J T	1	R408	
43	-65	RD-4POT0683J	RES C-F 68K OHM 1/4W J T	1	R510	
44	-66	RD-4POT0220J	RES C-F 22 OHM 1/4W J T	5	R519	
45	-67	RS02POF-820J	RESISTOR, MOF, RS2W 82 OHM J FO	1	R213	

1402 SERVICE MANUAL

NO.	COMMODORE PART CODE	VENDOR PART CODE	PART NAME & DESCRIPTION	QTY	LOCATION CODE	REMARKS
46	-68	RF-2PON0101J	RESISTOR FUSE, 1/2W 100 OHM J	1	R517	
47	-69	RF-2PON0220J	RESISTOR FUSE, 1/2W 22 OHM J	1	R519	
48	-70	CK45BN2H221K	CAP CD, CK45B 500V 220 PF K	1	R504	
49	-71	CC45CN1H470J	CAP CD, CC45 CH 40V 47PF J	1	R408	
50	-72	CE04AN1A222M	CAP EL, 2200UF 10V M	1	C411	
51	-73	CE04AN1C101M	CAP EL, 100UF 16V M	3	C501	
52	-74	CE04LN1C101M	CAP EL, CE04SXA 16V 100UF M	1	C508	
53	-75	CE04AN1C221M	CAP EL, 200UF 16V M	1	C202	
54	-76	CE04LN1C470M	CAP EL, CE04SM 16V 47UF M	1	C201	
55	-77	CE04AN1E101M	CAP EL, 100UF 25V M	1	C404	
56	-78	CE04AN1H2R2M	CAP EL, 50V 2.2UF M	1	C503	
57	-79	CE04AN1H4R7M	CAP EL, 4.7UF 50V M	1	C502	
58	-80	CE04AN2A2R2M	CAP EL, 2.2UF 100V M	1	C510	
59	-81	CE04AN2C242M	CAP EL, 2.2UF 160V M	1	C511	
60	-82	E42007001080	CAP EL, NPHF 25V 10UF M	1	C505	
61	-83	CQ92BN2A103K	CAP PE 0.01UF 100V K	3	C203	
62	-84	CQ92BN2A104K	CAP PE 0.1UF 100V K	3	C402	
63	-85	CQ92BN2A154K	CAP PE 0.15UF 100V J	1	C406	
64	-86	CQ93PF2G183J	CAP PE 0.018UF 400V J	1	C506	⚠
65	-87	CQ93PF2J223K	CAP PE 0.022UF 630V K	1	C509	
66	-88	E42019005010	COIL-H-LIN, 12PAI×26mm(20uH)	1	L502	⚠
67	-89	E42019006010	COIL-H-WIDTH16PAI×41.5mm, 15-60	1	L503	⚠
68	-90	E42019007010	COIL CHOKE 22UH 20%	1	L504	
69	-91	E42031001030	TRANCE FBT, FMD-1245DL(E)	1	T501	
70	-92	E42015003022	VR H1052A 330K OHM	1	VR403	
71	-93	E42015003190	SEMI-RES 100K OHM	2	VR401	
72	-94	E42015003210	SEMI-RES 220K OHM	1	VR501	⚠
73	-95	E42015005270	SEMI-RES 2.2M OHM	1	VR50319	
74	-96	E42043004030	CONN POST-4P 5277-04A	1	P503	
75	-97	E42043007020	CONN POST-3P 5067-03A	2	D201,P501	
76	-98	E42043007050	CONN POST-6P 5267-06A	1	P504	
77	-99	E42043024010	CONN POST-2P 5273-02A	1	P703	⚠
78	602242-00	E42045005010	CONN ASSY 4PIN 5265-04	1	J503	
79	602242-01	E42045047010	CONN ASSY 3PIN	1	J201	
80	-02	E42045001040	CONN ASSY 3PIN 5264-03	1	J501	
81	-03	WC14T22300DR	WIRE UL 1007 AWG22 17/0.16 DR	1	B*	
82	-04	WC14T22300BK	WIRE UL 1007 AWG22 17/0.16 BK	1	GMD	
83	-05	WC14T22300RD	WIRE UL 1007 AWG22 17/0.16 RD	1	+12	
84	-06	WC14T22300BL	WIRE UL 1007 AWG22 17/0.16 BL	1	G ₁	
85	-07	-01 WC14T22300GY				
86	-08	WC14T22300YW	WIRE UL 1007 AWG22 17/0.16 YW	1	G ₄	
87	-09	WC14T22300GY	WIRE UL 1185 AWG26 GY	1	VIDEO	
88	-10	B4201001100A	FENCE SHIELD(VIDEO) SPTE T : 0.	1		
89	-11	B4201001200C	CASE SHIELD(VIDEO) SPTE T : 0.3	1		
90	-12	B4201001400B	BRKT TR SUP 3 T1.8 ZPC2	1		
91	-13	B4201003300A	BASE SHIELD(VIDEO) SPTE T : 0.3	1		
92	-14	B4201003500B	FENCE SHIELD(VIDEO) SPCC TO.8	1		
93	-15	M14743010012	SCREW TT3 BIN(+) 3*10 MSZP	1		
94	-16	B4008500100A	CABLE TIE NYLON 6	5		

PCB LAYOUT





EXPLODED VIEW

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34. M 14743010012	SCREW TT3 BIN(+)*3*10	1	스crews 볼트 3*10mm
35. M 11184006040	SCREW WAS(+)*M 4*6	1	스crews 와셔 4*6mm
36. DNKL G205E	DIODE LED	1	다이오드 LED
37. E 4208000203A	POWER B/D ASS'Y	1	전원 보드 조립체
38. TNKTB 595 Y	TRANSISTOR	2	트랜지스터
39. E42019004020	COIL DY	1	코일 DY
40. E4204502101B	CORD ASS'Y	1	코드 조립체
41. E42045022010	CRT GND WIRE ASS'Y	1	CRT 접지 와이어 조립체
42. E4204501501A	CABLE SIGNAL	1	신호 케이블
43. RING TERMINAL ASS'Y	4	1	링 터미널 조립체
44. E42045020010	CONN ASS'Y 1 PIN	1	1핀 커넥터 조립체
45. E42080002010	LED B/D ASS'Y	1	LED 보드 조립체
46. E4204501501A	CABLE SIGNAL	1	신호 케이블
47. E42031007020	TRANS POWER	1	전력 트랜지스터
48. E42080001101A	MAIN B/D ASS'Y	1	메인 보드 조립체
49. E42020003010	SILICON RUBBER	2	실리콘 고무
50. E42017001270	VOLUME ROTARY	1	볼륨 회전 스위치
51. E42017001340	VOLUME ROTARY	1	볼륨 회전 스위치
52. E42033001050	CRT	1	CRT
53. E4208000302A	CRT B/D ASS'Y	1	CRT 보드 조립체

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33. M 14743010012	SCREW TT3 BIN(+)*3*10	1	스crews 볼트 3*10mm
32. B4208001000A	CORD BAND	1	코드 밴드
31. M 11143010014	SCREW BIN(+)*M 3*10	1	스crews BIN(+)*M 3*10
30. M 13443010012	SCREW ST2 BIN(+)*M 3	1	스crews ST2 BIN(+)*M 3
29. M 1344401014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
28. E420304000A	SWITCH A.C.	1	AC 스위치
27. M 11143010012	SCREW BIN(+)*M 3*12	1	스crews BIN(+)*M 3*12
26. M 11183008012	SCREW WAS(+)*M 3*8	1	스crews 와셔 3*8mm
25. M 17314006012	SCREW PAN(+)*M 4*6	4	스crews 판 4*6mm
24. M 13444010012	SCREW ST2 BIN(+)*M 3	4	스crews ST2 BIN(+)*M 3
23. M 13434020014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
22. M 11144008012	SCREW BIN(+)*M 4*8	4	스crews BIN(+)*M 4*8
21. B4208000200A	SCREW ST2 TRSM(+)*M 4	4	스crews ST2 TRSM(+)*M 4
20. B4208000100A	CABLE TIE	3	케이블 타이
19. B4204505800A	PLATE SPEC	1	플레이트 스펙
18. B4204505700A	PLATE LOGO	1	플레이트 로고
17. B4204000300A	SPRING EXTENSION	1	스프링 확장
16. B4203500600B	RUBBER FOOT	2	고무 발
15. B4201507700A	COVER REAR	1	후면 커버
14. B4201502200A	STOPPER CORD	1	스톱퍼 코드
13. B4201508200A	KNOB V.R	2	노브 볼륨
12. B4201013800A	BRKT V.R	1	브라켓 볼륨
11. B4201507600A	COVER FRONT	1	전면 커버
10. B4201013700A	CHASSIS SUB	1	하시스 서브
9. M 11143010012	SCREW BIN(+)*M 3*10	2	스crews BIN(+)*M 3*10
8. B4201004200A	GRIP GROUND	1	그립 그라운드
7. B4201003500A	FENCE SHIELD(CRT)	1	펜스 실드 (CRT)
6. B4201003100A	BASE SHIELD DIVIDED	1	베이스 실드 (분리형)
5. B4201001500B	HEAT SINK (TR)	1	히트 싱크 (트랜지스터)
4. B4201001400B	BRKT (TR)	2	브라켓 (트랜지스터)
3. B4201001300A	CASE SHIELD (TUBE)	1	케이스 실드 (튜브)
2. B4201001200B	CASE SHIELD DIVIDED	1	케이스 실드 (분리형)
1. B4201001100A	FENCE SHIELD DIVIDED	1	펜스 실드 (분리형)

NOTE
WHEN COMPATIBILITY WITH IBM AND APPLE
IS REQUIRED, THIS ASTERISK(*) PART WILL
BE EMPLOYED

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33. M 14743010012	SCREW TT3 BIN(+)*3*10	1	스crews 볼트 3*10mm
32. B4208001000A	CORD BAND	1	코드 밴드
31. M 11143010014	SCREW BIN(+)*M 3*10	1	스crews BIN(+)*M 3*10
30. M 13443010012	SCREW ST2 BIN(+)*M 3	1	스crews ST2 BIN(+)*M 3
29. M 1344401014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
28. E420304000A	SWITCH A.C.	1	AC 스위치
27. M 11143010012	SCREW BIN(+)*M 3*12	1	스crews BIN(+)*M 3*12
26. M 11183008012	SCREW WAS(+)*M 3*8	1	스crews 와셔 3*8mm
25. M 17314006012	SCREW PAN(+)*M 4*6	4	스crews 판 4*6mm
24. M 13444010012	SCREW ST2 BIN(+)*M 3	4	스crews ST2 BIN(+)*M 3
23. M 13434020014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
22. M 11144008012	SCREW BIN(+)*M 4*8	4	스crews BIN(+)*M 4*8
21. B4208000200A	SCREW ST2 TRSM(+)*M 4	4	스crews ST2 TRSM(+)*M 4
20. B4208000100A	CABLE TIE	3	케이블 타이
19. B4204505800A	PLATE SPEC	1	플레이트 스펙
18. B4204505700A	PLATE LOGO	1	플레이트 로고
17. B4204000300A	SPRING EXTENSION	1	스프링 확장
16. B4203500600B	RUBBER FOOT	2	고무 발
15. B4201507700A	COVER REAR	1	후면 커버
14. B4201502200A	STOPPER CORD	1	스톱퍼 코드
13. B4201508200A	KNOB V.R	2	노브 볼륨
12. B4201013800A	BRKT V.R	1	브라켓 볼륨
11. B4201507600A	COVER FRONT	1	전면 커버
10. B4201013700A	CHASSIS SUB	1	하시스 서브
9. M 11143010012	SCREW BIN(+)*M 3*10	2	스crews BIN(+)*M 3*10
8. B4201004200A	GRIP GROUND	1	그립 그라운드
7. B4201003500A	FENCE SHIELD(CRT)	1	펜스 실드 (CRT)
6. B4201003100A	BASE SHIELD DIVIDED	1	베이스 실드 (분리형)
5. B4201001500B	HEAT SINK (TR)	1	히트 싱크 (트랜지스터)
4. B4201001400B	BRKT (TR)	2	브라켓 (트랜지스터)
3. B4201001300A	CASE SHIELD (TUBE)	1	케이스 실드 (튜브)
2. B4201001200B	CASE SHIELD DIVIDED	1	케이스 실드 (분리형)
1. B4201001100A	FENCE SHIELD DIVIDED	1	펜스 실드 (분리형)

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33. M 14743010012	SCREW TT3 BIN(+)*3*10	1	스crews 볼트 3*10mm
32. B4208001000A	CORD BAND	1	코드 밴드
31. M 11143010014	SCREW BIN(+)*M 3*10	1	스crews BIN(+)*M 3*10
30. M 13443010012	SCREW ST2 BIN(+)*M 3	1	스crews ST2 BIN(+)*M 3
29. M 1344401014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
28. E420304000A	SWITCH A.C.	1	AC 스위치
27. M 11143010012	SCREW BIN(+)*M 3*12	1	스crews BIN(+)*M 3*12
26. M 11183008012	SCREW WAS(+)*M 3*8	1	스crews 와셔 3*8mm
25. M 17314006012	SCREW PAN(+)*M 4*6	4	스crews 판 4*6mm
24. M 13444010012	SCREW ST2 BIN(+)*M 3	4	스crews ST2 BIN(+)*M 3
23. M 13434020014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
22. M 11144008012	SCREW BIN(+)*M 4*8	4	스crews BIN(+)*M 4*8
21. B4208000200A	SCREW ST2 TRSM(+)*M 4	4	스crews ST2 TRSM(+)*M 4
20. B4208000100A	CABLE TIE	3	케이블 타이
19. B4204505800A	PLATE SPEC	1	플레이트 스펙
18. B4204505700A	PLATE LOGO	1	플레이트 로고
17. B4204000300A	SPRING EXTENSION	1	스프링 확장
16. B4203500600B	RUBBER FOOT	2	고무 발
15. B4201507700A	COVER REAR	1	후면 커버
14. B4201502200A	STOPPER CORD	1	스톱퍼 코드
13. B4201508200A	KNOB V.R	2	노브 볼륨
12. B4201013800A	BRKT V.R	1	브라켓 볼륨
11. B4201507600A	COVER FRONT	1	전면 커버
10. B4201013700A	CHASSIS SUB	1	하시스 서브
9. M 11143010012	SCREW BIN(+)*M 3*10	2	스crews BIN(+)*M 3*10
8. B4201004200A	GRIP GROUND	1	그립 그라운드
7. B4201003500A	FENCE SHIELD(CRT)	1	펜스 실드 (CRT)
6. B4201003100A	BASE SHIELD DIVIDED	1	베이스 실드 (분리형)
5. B4201001500B	HEAT SINK (TR)	1	히트 싱크 (트랜지스터)
4. B4201001400B	BRKT (TR)	2	브라켓 (트랜지스터)
3. B4201001300A	CASE SHIELD (TUBE)	1	케이스 실드 (튜브)
2. B4201001200B	CASE SHIELD DIVIDED	1	케이스 실드 (분리형)
1. B4201001100A	FENCE SHIELD DIVIDED	1	펜스 실드 (분리형)

NOTE
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IS REQUIRED, THIS ASTERISK(*) PART WILL
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33. M 14743010012	SCREW TT3 BIN(+)*3*10	1	스crews 볼트 3*10mm
32. B4208001000A	CORD BAND	1	코드 밴드
31. M 11143010014	SCREW BIN(+)*M 3*10	1	스crews BIN(+)*M 3*10
30. M 13443010012	SCREW ST2 BIN(+)*M 3	1	스crews ST2 BIN(+)*M 3
29. M 1344401014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
28. E420304000A	SWITCH A.C.	1	AC 스위치
27. M 11143010012	SCREW BIN(+)*M 3*12	1	스crews BIN(+)*M 3*12
26. M 11183008012	SCREW WAS(+)*M 3*8	1	스crews 와셔 3*8mm
25. M 17314006012	SCREW PAN(+)*M 4*6	4	스crews 판 4*6mm
24. M 13444010012	SCREW ST2 BIN(+)*M 3	4	스crews ST2 BIN(+)*M 3
23. M 13434020014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
22. M 11144008012	SCREW BIN(+)*M 4*8	4	스crews BIN(+)*M 4*8
21. B4208000200A	SCREW ST2 TRSM(+)*M 4	4	스crews ST2 TRSM(+)*M 4
20. B4208000100A	CABLE TIE	3	케이블 타이
19. B4204505800A	PLATE SPEC	1	플레이트 스펙
18. B4204505700A	PLATE LOGO	1	플레이트 로고
17. B4204000300A	SPRING EXTENSION	1	스프링 확장
16. B4203500600B	RUBBER FOOT	2	고무 발
15. B4201507700A	COVER REAR	1	후면 커버
14. B4201502200A	STOPPER CORD	1	스톱퍼 코드
13. B4201508200A	KNOB V.R	2	노브 볼륨
12. B4201013800A	BRKT V.R	1	브라켓 볼륨
11. B4201507600A	COVER FRONT	1	전면 커버
10. B4201013700A	CHASSIS SUB	1	하시스 서브
9. M 11143010012	SCREW BIN(+)*M 3*10	2	스crews BIN(+)*M 3*10
8. B4201004200A	GRIP GROUND	1	그립 그라운드
7. B4201003500A	FENCE SHIELD(CRT)	1	펜스 실드 (CRT)
6. B4201003100A	BASE SHIELD DIVIDED	1	베이스 실드 (분리형)
5. B4201001500B	HEAT SINK (TR)	1	히트 싱크 (트랜지스터)
4. B4201001400B	BRKT (TR)	2	브라켓 (트랜지스터)
3. B4201001300A	CASE SHIELD (TUBE)	1	케이스 실드 (튜브)
2. B4201001200B	CASE SHIELD DIVIDED	1	케이스 실드 (분리형)
1. B4201001100A	FENCE SHIELD DIVIDED	1	펜스 실드 (분리형)

NOTE
WHEN COMPATIBILITY WITH IBM AND APPLE
IS REQUIRED, THIS ASTERISK(*) PART WILL
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33. M 14743010012	SCREW TT3 BIN(+)*3*10	1	스crews 볼트 3*10mm
32. B4208001000A	CORD BAND	1	코드 밴드
31. M 11143010014	SCREW BIN(+)*M 3*10	1	스crews BIN(+)*M 3*10
30. M 13443010012	SCREW ST2 BIN(+)*M 3	1	스crews ST2 BIN(+)*M 3
29. M 1344401014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
28. E420304000A	SWITCH A.C.	1	AC 스위치
27. M 11143010012	SCREW BIN(+)*M 3*12	1	스crews BIN(+)*M 3*12
26. M 11183008012	SCREW WAS(+)*M 3*8	1	스crews 와셔 3*8mm
25. M 17314006012	SCREW PAN(+)*M 4*6	4	스crews 판 4*6mm
24. M 13444010012	SCREW ST2 BIN(+)*M 3	4	스crews ST2 BIN(+)*M 3
23. M 13434020014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
22. M 11144008012	SCREW BIN(+)*M 4*8	4	스crews BIN(+)*M 4*8
21. B4208000200A	SCREW ST2 TRSM(+)*M 4	4	스crews ST2 TRSM(+)*M 4
20. B4208000100A	CABLE TIE	3	케이블 타이
19. B4204505800A	PLATE SPEC	1	플레이트 스펙
18. B4204505700A	PLATE LOGO	1	플레이트 로고
17. B4204000300A	SPRING EXTENSION	1	스프링 확장
16. B4203500600B	RUBBER FOOT	2	고무 발
15. B4201507700A	COVER REAR	1	후면 커버
14. B4201502200A	STOPPER CORD	1	스톱퍼 코드
13. B4201508200A	KNOB V.R	2	노브 볼륨
12. B4201013800A	BRKT V.R	1	브라켓 볼륨
11. B4201507600A	COVER FRONT	1	전면 커버
10. B4201013700A	CHASSIS SUB	1	하시스 서브
9. M 11143010012	SCREW BIN(+)*M 3*10	2	스crews BIN(+)*M 3*10
8. B4201004200A	GRIP GROUND	1	그립 그라운드
7. B4201003500A	FENCE SHIELD(CRT)	1	펜스 실드 (CRT)
6. B4201003100A	BASE SHIELD DIVIDED	1	베이스 실드 (분리형)
5. B4201001500B	HEAT SINK (TR)	1	히트 싱크 (트랜지스터)
4. B4201001400B	BRKT (TR)	2	브라켓 (트랜지스터)
3. B4201001300A	CASE SHIELD (TUBE)	1	케이스 실드 (튜브)
2. B4201001200B	CASE SHIELD DIVIDED	1	케이스 실드 (분리형)
1. B4201001100A	FENCE SHIELD DIVIDED	1	펜스 실드 (분리형)

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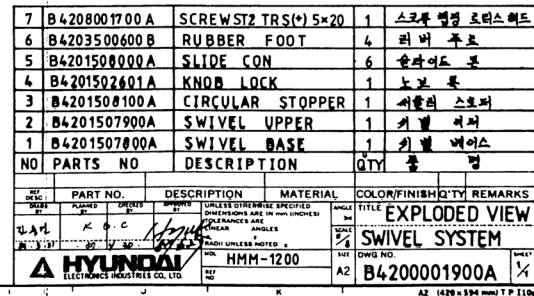
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33. M 14743010012	SCREW TT3 BIN(+)*3*10	1	스crews 볼트 3*10mm
32. B4208001000A	CORD BAND	1	코드 밴드
31. M 11143010014	SCREW BIN(+)*M 3*10	1	스crews BIN(+)*M 3*10
30. M 13443010012	SCREW ST2 BIN(+)*M 3	1	스crews ST2 BIN(+)*M 3
29. M 1344401014	SCREW ST2 TRSM(+)*M 4	2	스crews ST2 TRSM(+)*M 4
28. E420304000A	SWITCH A.C.	1	AC 스위치
27. M 11143010012	SCREW BIN(+)*M 3*12	1	스crews BIN(+)*M 3*12
26. M 11183008012	SCREW WAS(+)*M 3*8	1	스crews 와셔 3*8mm
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18. B4204505700A	PLATE LOGO	1	플레이트 로고
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3. B4201001300A	CASE SHIELD (TUBE)	1	케이스 실드 (튜브)
2. B4201001200B	CASE SHIELD DIVIDED	1	케이스 실드 (분리형)
1. B4201001100A	FENCE SHIELD DIVIDED	1	펜스 실드 (분리형)

NOTE
WHEN COMPATIBILITY WITH IBM AND APPLE





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